



**Federal Communications Commission
Washington, D.C. 20554**

DA 12-1310

August 10, 2012

Mr. Donald M. Jansky
Jansky-Barmat Telecommunications, Inc.
7703 Arrowood Ct.
Bethesda, MD 20817

Re: Hispamar Satellite, S.A.
IBFS File No. SAT-PPL-20120418-00069
Call Sign S2865

Dear Mr. Jansky:

On April 18, 2012, Hispamar Satellite, S.A. (Hispamar) filed the above-captioned Petition for Declaratory Ruling to add the Amazonas-3 space station to be operated at 61° W.L. and licensed by Brazil, to the Commission's Permitted Space Station List in the C/Ku/Ka-bands. For the reasons discussed below, we dismiss the petition, without prejudice to refiling.

Section 25.112 of the Commission's rules, 47 C.F.R. § 25.112, requires the Commission to return as unacceptable for filing any space station application that is not substantially complete, contains internal inconsistencies, or does not substantially comply with the Commission's rules. Section 25.137(b) of the Commission's rules, 47 C.F.R. § 25.137(b), requires entities filing a Petition for Declaratory Ruling to serve the United States from a non-U.S. licensed space station to provide technical information for the space station in accordance with Part 25. Hispamar's petition does not provide certain information required by Section 25 of the Commission's rules, or request waivers of the rules, which renders the application unacceptable for filing and subject to dismissal. The deficiencies are as follows:

- Section 25.210(b) of the Commission's rules requires all space stations in the Fixed-Satellite Service (FSS) in the Ka-band to be capable of switching polarization sense upon ground command. Hispamar acknowledges that the Ka-band payload transmission polarization on Amazonas-3 cannot be reversed from the ground. Hispamar neither requested a waiver of the rule, nor provided any justification to support a waiver.¹
- Section 25.210(i) requires FSS space station antennas to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the crosspolar gain of the antenna in the assigned frequency band is at least 30 dB within its primary coverage area.

¹ We note that in its Form 312, Hispamar certified that it was not requesting any waivers in its Petition. Hispamar Satellite S.A., IBFS File No. SAT-PPL-20120418-00069 (*Hispamar Petition*), Form 312 Box 35.

Hispanmar indicates that the cross-polarization isolation of Amazonas-3's space station Ka-band antennas will be 26 dB within the primary coverage area. Hispanmar neither requested a waiver of the rule, nor provided any justification to support a waiver.

- Section 25.140(b)(2) requires applicants requesting operating authority for FSS space stations to provide an interference analysis. The Commission has previously clarified the types of showings that must be provided as part of an interference analysis.² Hispanmar's exhibits to the application do not provide the type of showing required and are insufficient to demonstrate that its proposed FSS satellite system will be compatible with the Commission's two-degree orbital spacing requirement. Hispanmar neither requested a waiver of the rule, nor provided any justification to support a waiver.
- Section 25.283(c) specifies that space stations must discharge all stored energy sources at the end-of-life of the space station by venting excess propellant, discharging batteries, relieving pressure vessels, and other appropriate measures. Section 25.114(d)(14)(ii) requires applicants to demonstrate how stored energy will be removed at the spacecraft's end-of-life.³ Hispanmar's application, however, states that a helium tank will be sealed under pressure at the end-of-life and that some propellant will remain in the propulsion system.⁴ Hispanmar neither requested a waiver of the rules, nor provided any justification to support a waiver.⁵
- Section 25.114(d)(14)(iv) requires applicants to disclose the altitude selected for a post-mission disposal orbit of a geostationary orbit spacecraft, as well as the calculations that are used in deriving the disposal orbit. Hispanmar states that it will dispose of the spacecraft by "moving it to a minimum altitude of 414 kilometers above the geostationary arc,"⁶ but does not disclose the calculations used to derive the disposal orbit.⁷ Hispanmar neither requested a waiver of the rule, nor provided any justification to support a waiver.

² Clarification of 47 C.F.R. § 25.140(b)(2), Space Station Application Interference Analysis, *Public Notice*, No. SPB-195, DA 03-3863 (rel. Dec. 3, 2003).

³ 47 C.F.R. § 25.114(d)(14)(ii) (requiring applicants to demonstrate "whether stored energy will be removed at the spacecraft's end of life, by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharge state, and removing any remaining source of stored energy, or through other equivalent procedures specifically disclosed in the application.")

⁴ *Hispanmar Petition*, Attachment A at 2.

⁵ In any refiled application, Hispanmar must specify the volume(s) in which helium pressurant is sealed, and the anticipated mass of remaining helium. Hispanmar's application indicates that fuel or oxidizer may remain within the propulsion system at the end-of-life of the satellite, depending on which of the two is depleted first during end-of-life maneuvers. We ask Hispanmar to specify the chemical composition of the fuel and oxidizer, and to specify separately for the fuel side and the oxidizer side of the propulsion system, the volume(s) in which materials are contained. We also ask for a worst case estimate of the mass of fuel and helium pressurant, or oxidizer and helium pressurant, remaining within the respective sides of the propulsion system.

⁶ *Hispanmar Petition*, Attachment – Section 25.114(c) Technical Information at 7.

⁷ Section 25.283(a) (End-of-life disposal) establishes a minimum perigee altitude for geostationary orbit spacecraft based on the solar pressure radiation coefficient (C_R) and the area-to-mass (A/m) ratio in square meters per kilogram of the spacecraft. As part of any refiling, Hispanmar must disclose the minimum

In addition, Section 25.114(d)(3) requires applicants to submit predicted space station antenna gain contour(s) for each transmit and receive antenna beam in .gxt format. The information submitted by Hispamar was not properly formatted, precluding our ability to open the files and review the antenna gain contour information. As a result, we are unable to determine that the Amazonas-3 space station meets the Commission's technical requirements. To expedite the processing of any refiled application, Hispamar should ensure that the information is properly formatted.

Further, Hispamar states it did not submit technical information for its C-and Ku-band frequencies because these frequencies and associated technical characteristics are the same as those on the Amazonas-1 space station, which is on the Permitted Space Station List in the C/Ku-Bands.⁸ Because the Amazonas-1 space station was launched in 2004 and has a different design than Amazonas-3, we request that any refiled application include the technical information for *all* frequencies Amazonas-3 will use to serve the United States. Finally, Hispamar states that Amazonas-3 is a replacement for Amazonas-1.⁹ Please state Hispamar's plans for the Amazonas-1 space station once Amazonas-3 becomes operational.

For the reasons set forth above, pursuant to Section 25.112(a)(1) of the Commission's rules, 47 C.F.R. § 25.112(a)(1), and Section 0.261 of the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, we dismiss the Hispamar's application without prejudice to refile.

Sincerely,

Robert G. Nelson
Chief, Satellite Division
International Bureau

perigee altitude required by Section 25.283(c), as well as the values of C_R , A , and m used to calculate that altitude.

⁸ *Hispamar Petition*, Attachment at 2 (unnumbered)

⁹ *Id.*